

WHAT IS CLAIMED IS:

1. A method for detecting interference energy in a sliding door safety system comprising the steps of:
 - disposing at least one emitter along a first vertical surface;
 - disposing at least one receiver corresponding to said at least one emitter along a second vertical surface;
 - activating said at least one receiver;
 - activating said at least one emitter to emit an energy beam comprising a modulated square wave of a predetermined frequency;
 - sampling an energy intensity received by said activated at least one receiver a predetermined number of times recording each time a received energy intensity to form a plurality of recorded energy intensities;
 - selecting the lowest magnitude one of said plurality of recorded energy intensities to form a lowest recorded energy intensity;
 - comparing said lowest recorded energy intensity to a threshold value; and
 - determining a source of said energy intensity to be external when said lowest recorded energy intensity is less than said threshold value.
2. The method of claim 1 comprising the additional steps of:
 - performing statistical analysis upon said plurality of recorded received energy intensities to determine a measure of consistency amongst said plurality of recorded received energy intensities when said source of said energy intensity has not previously been determined to be external; and

determining a source of said energy intensity to be external if said measure of consistency is sufficiently low.

3. The method of claim 2 comprising the additional step of modulating the energy beam with a predefined binary code.

4. The method of claim 3 comprising the additional step of: sampling an energy signal received by said activated at least one receiver a predetermined number of times recording each time a received energy signal to form a plurality of recorded energy signals; and verifying the presence of said predefined binary code in at least one of the sampled plurality of recorded energy signals.

5. The method of claim 1 wherein disposing said at least one emitter along a first vertical surface comprises disposing said at least one emitter along an elevator door.

6. The method of claim 1 wherein disposing said at least one receiver corresponding to said at least one emitter along a second vertical surface comprises disposing said at least one receiver along an elevator door.

7. The method of claim 1 wherein said energy beam comprises IR energy.